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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,446	04/15/2004	Yun-Bok Lee	053785-5177	6611

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EXAMINER
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CHOWDHURY, TARIFUR RASHID

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 02/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

54

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/824,446	LEE, YUN-BOK	
	<b>Examiner</b>	<b>Art Unit</b>	
	Tarifur R. Chowdhury	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on amendment filed on 12/02/05.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12/02/05</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicant's admitted prior art (AAPA) in view of KR 1999-0058889 (889') or Tajima, USPAT 6,191,881.**

3. The AAPA described in the instant application discloses (pages 10-11) and shows in Fig 6, an in-plane switching liquid crystal display device, comprising:

- a first liquid crystal cell area (VIa) that has a first size and a second liquid crystal cell area (VIb) that has a second size on a first bare glass (99), wherein first longer sides of the first liquid crystal cell area run in a first direction on the first bare glass and second longer sides of the second liquid crystal cell areas run in a second direction;

The AAPA further discloses (pages 7-8) and shows in Fig. 4, a conventional in-plane switching type liquid crystal display device comprising:

- array elements that include thin film transistors (not shown), common electrodes (72) and pixel electrodes (74) within the first and second liquid crystal cell areas (Fig. 4) of the first bare glass (70); and

- a color filter layer (not shown) on a second bare glass (80) having liquid

crystal cell areas corresponding in size to the first and second liquid crystal cell areas are defined.

The AAPA differs from the claimed invention because it does not explicitly disclose that the common electrodes and the pixel electrodes define concentric ring-shaped apertures.

Reference 889' is related to an in-plane switching type liquid crystal display wherein the pixel electrode (211) and the common electrode (219) define concentric ring-shaped apertures (Fig. 3). Similarly Tajima discloses a variable focal length panel (liquid crystal panel) which is practicable for lens used in an optical pickup device wherein the panel includes electrodes defining concentric ring-shaped apertures (Figs. 1 and 2; col. 2, lines 9-13).

Reference 889' and Tajima are evidence that ordinary workers in the art would find a reason, suggestion or motivation to form pixel electrode and common electrode that define concentric ring-shaped apertures.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the display device of the AAPA by using common electrodes and pixel electrodes that define concentric ring-shaped apertures in order to produce uniform electric field between the pixel electrode and the common electrode as well as obtain a practical variable focal length lens that can be produced at low cost.

Accordingly, claims 13 and 14 would have been obvious.

As to claim 15, it is clear from Fig. 6 of the AAPA that the first size is larger than

the second size.

As to claims 1-4, the AAPA also discloses and shows in Fig. 6 that the first bare glass having the array elements are rubbed in a first direction (RD'1) and the second bare glass having the color filter in a second rubbing direction (RD'2) opposite to the first rubbing direction wherein the first rubbing direction is 180 degrees. Further, the process for forming the in-plane switching liquid crystal display device merely recites the steps of forming each element and since each element must be formed to make the device, the method would have at least been obvious in view of the device.

As to claim 5, it is clear from Fig. 6 of the AAPA that the first direction is parallel with the second direction.

As to claims 6-8, the AAPA described in the instant application also shows in Fig. 5B a conventional in-plane switching type liquid crystal display wherein an array elements includes a gate line (GL) formed horizontally, a data line (DL) formed longitudinally and a common line (CL) parallel with the gate line and that the gate line and the data line cross each other to define a pixel region.

As to claims 9-12 and 16-19, reference 889' as well as Tajima shows in Fig. 3 and 1 respectively, that the common electrode includes a first ring-shaped common electrode pattern and a second ring-shaped common electrode pattern smaller than the first ring-shaped common electrode pattern, and half portions of both first and second ring-shaped common electrode pattern extend from a common line in opposite directions and that the pixel electrode includes a ring-shaped pixel electrode pattern between the first and second common electrode patterns, and a bullseye-shaped pixel

electrode pattern inside the second ring-shaped common electrode pattern and wherein the pixel electrode is connected to the thin film transistor through a pixel connecting line that connects the ring-shaped circular pixel electrode to the bullseye-shaped pixel electrode.

As to claim 20, the AAPA described in the instant application also discloses that the array elements includes a horizontal gate line (GL), a longitudinal data line (DL) and a common line (CL) parallel with the gate line.

#### ***Response to Arguments***

4. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

#### ***Conclusion***

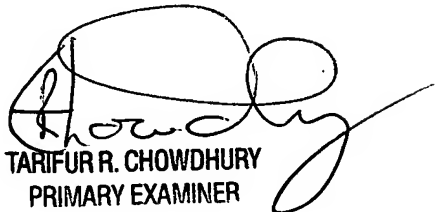
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tarifur R. Chowdhury whose telephone number is (571) 272-2287. The examiner can normally be reached on M-Th (6:30-5:00) Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2871

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TRC  
February 21, 2006



TARIFUR R. CHOWDHURY  
PRIMARY EXAMINER